List of Contents

NUMBER 1

B. Yavari and **A. Bedford** 1 Computation of the Biot drag and virtual mass coefficients

S. Olek, Y. Zvirin and **E. Elias** 13 Rewetting of hot surfaces by falling liquid films as a conjugate heat transfer problem

T. Shigechi and **Y. Lee** 35 Conjugated heat transfer of film pool boiling on a horizontal tube

V. X. Tung and **V. K. Dhir** 47 A hydrodynamic model for two-phase flow through porous media

S. Radev and **B. Tchavdarov** 67 Linear capillary instability of compound jets

A. Celmiņš 81 Representation of two-phase flows by volume averaging

S. H. Emerman 91 Heat transfer and lateral particle migration in suspension flow through a convergent channel

J. L. Castillo and **D. E. Rosner** 99 A nonequilibrium theory of surface deposition from particle-laden, dilute condensible vapor-containing laminar boundary layers

Brief Communication

C. J. Dobson and **N. A. Molloy** 121 Gas dispersion phenomena from porous stirring elements

I Software Survey Section

V Announcements

NUMBER 2

M. M. Lee and **T. J. Hanratty** 129 The inhibition of droplet deposition by the presence of a liquid wall film

R. I. Issa 141 Prediction of turbulent, stratified, two-phase flow in inclined pipes and channels

H. John, J. Reimann, F. Westphal and **L. Friedel** 155 Critical two-phase flow through rough slits

G. P. Celata, M. Cumo, F. D'Annibale and **G. E. Farello** 175 The influence of non-condensible gas on two-phase critical flow

M. Renksizbulut and **R. J. Haywood** 189 Transient droplet evaporation with variable properties and internal circulation at intermediate Reynolds numbers

K. L. Adams, W. B. Russel and **L. Rebenfeld** — 203 Radial penetration of a viscous liquid into a planar anisotropic porous medium

D. Y. Liu, K. Anders and **A. Frohn** — 217 Drag coefficients of single droplets moving in an infinite droplet chain on the axis of a tube

M. Ungarish — 233 Two-fluid analysis of centrifugal separation in a finite cylinder

Brief Communication
S. C. Low — 245 A transient unidimensional two-phase flow model and its application to a spark ignition engine

I Software Survey Section

V Announcements

NUMBER 3

C. Pauchon and **S. Banerjee** — 253 Interphase momentum interaction effects in the averaged multifield model. Part II: kinematic waves and interfacial drag in bubbly flows

J. D. Ballyk, M. Shoukri and **A. M. C. Chan** — 265 Steam–water annular flow in a horizontal dividing T-junction

J. J. M. Geraets — 287 Centrifugal scaling of isothermal gas–liquid flow in horizontal tubes

J. J. M. Geraets and **J. C. Borst** — 305 A capacitance sensor for two-phase void fraction measurement and flow pattern identification

E. Śliwicki and **J. Mikielewicz** — 321 Analysis of an annular–mist flow model in a T-junction

Wm. J. Garland and **J. D. Hoskins** — 333 Approximate functions for the fast calculation of light-water properties at saturation

A. A. Nicol, Z. L. Aidoun, R. J. Gribben and **G. Wilks** — 349 Heat transfer in the presence of condensate drainage

S. Gummalam, K. A. Narayan and **R. P. Chhabra** — 361 Rise velocity of a swarm of spherical bubbles through a non-Newtonian fluid: effect of zero shear viscosity

I Software Survey Section

V Announcements

NUMBER 4

G. C. Gardner — 375 Co-current flow of air and water from a reservoir into a short horizontal pipe

A. E. Dukler, J. A. Fabre, J. B. McQuillen and **R. Vernon**	389	Gas–liquid flow at microgravity conditions: flow patterns and their transitions
P. S. L. Yuen, D. A. Meneley and **S. Banerjee**	401	Measurement of void fraction by a neutron-scattering technique with portable sources: effect of the incident energy spectrum
N. N. Clark and **R. Turton**	413	Chord length distributions related to bubble size distributions in multiphase flows
M. T. Rubel, H. M. Soliman and **G. E. Sims**	425	Phase distribution during steam–water flow in a horizontal T-junction
S. T. Hwang, H. M. Soliman and **R. T. Lahey Jr**	439	Phase separation in dividing two-phase flows
J. O. Corbett	459	Particle capture by interception and its relevance to nuclear reactor containment sprays
M. Syamlal and **T. J. O'Brien**	473	Simulation of granular layer inversion in liquid fluidized beds
M. Shapira and **S. Haber**	483	Low Reynolds number motion of a droplet between two parallel plates
Z. Bilicki, J. Kestin and **M. M. Pratt**	507	The effect of three closures on critical conditions in two-phase flow with unequal phase velocities
R. S. MacTaggart, D. Hin-Sum Law, J. H. Masliyah and **K. Nandakumar**	519	Gravity separation of concentrated bidisperse suspensions in inclined plate settlers
	I	Announcements

NUMBER 5

J. M. Ham and **G. M. Homsy**	533	Hindered settling and hydrodynamic dispersion in quiescent sedimenting suspensions
J. T. Kuo and **G. B. Wallis**	547	Flow of bubbles through nozzles
Y. Tsuji, Y. Morikawa, T. Tanaka, K. Karimine and **S. Nishida**	565	Measurement of an axisymmetric jet laden with coarse particles
K. M. Becker, A. Enerholm, L. Sardh, W. Köhler, W. Kastner and **W. Krätzer**	575	Heat transfer in an evaporator tube with circumferentially non-uniform heating
R. Kowe, J. C. R. Hunt, A. Hunt, B. Couet and **L. J. S. Bradbury**	587	The effects of bubbles on the volume fluxes and the pressure gradients in unsteady and non-uniform flow of liquids

N. Apazidis 607 Gas–particle flow in a deep vertical cavity due to thermal convection and phase separation

K. Nikaien and **J. Peddieson Jr** 633 Plane two-phase stagnation-point flow above a stretching sheet

Brief Communication

J. T. Robinson, N. E. Todreas and **D. Ebeling-Koning** 645 Void distributions in bubbly flow through yawed rod arrays

Letter to the Editor

K. Bendiksen, N. Hoyer, and **D. Malnes** 653 Effect of gas expansion on slug length

I Announcements

NUMBER 6

V. E. Nakoryakov, B. G. Pokusaev, I. R. Shreiber and **N. A. Pribaturin** 655 The wave dynamics of a vapour–liquid medium

D. C. Besnard and **F. H. Harlow** 679 Turbulence in multiphase flow

B. J. Azzopardi 701 Measurements and observations of the split of annular flow at a vertical T-junction

C. H. Lee and **I. Mudawwar** 711 A mechanistic critical heat flux model for subcooled flow boiling based on local bulk flow conditions

M. Ungarish 729 Numerical investigation of two-phase rotating flow

T. Miyahara, K. Tsuchiya and **L.-S. Fan** 749 Wake properties of a single gas bubble in a three-dimensional liquid–solid fluidized bed

P. Y. W. Yu and **R. L. Varty** 765 Laser-Doppler measurement of the velocity and diameter of bubbles using the triple-peak technique

P. Andreussi, A. Di Donfrancesco and **M. Messia** 777 An impedance method for the measurement of liquid hold-up in two-phase flow

B. Ruck and **B. Makiola** 787 Particle dispersion in a single-sided backward-facing step flow